

WHAT IS CLAIMED IS:

1 1. A method for routing communication requests targeted for a user over a
2 network, comprising:
3 subscribing a network entity to presence information of the user;
4 receiving at least one notification at the subscribing network entity
5 indicating a state of the presence information of the user; and
6 creating routing instructions for routing incoming communication requests
7 targeted for the user, based on the state of the presence information.

1 2. The method of Claim 1, further comprising routing the incoming
2 communication requests according to the routing instructions.

1 3. The method of Claim 2, further comprising storing the routing instructions
2 for reference by the network entity upon receipt of the incoming communication requests
3 targeted for the user.

1 4. The method of Claim 1, wherein creating routing instructions for routing
2 incoming communication requests comprises creating a routing script, and further
3 comprising storing the routing script for reference by the network entity upon receipt of the
4 incoming communication requests targeted for the user.

1 5. The method of Claim 1, further comprising receiving filter criteria at the
2 network entity from a database entity, and wherein creating routing instructions for routing
3 incoming communication requests comprises dynamically modifying the filter criteria
4 based on the presence information of the user.

1 6. The method of Claim 1, wherein receiving at least one notification at the
2 subscribing network entity indicating a state of the presence information comprises
3 receiving one or more notifications at the subscribing network entity indicating a change of
4 state of the presence information.

1 7. The method of Claim 1, wherein receiving at least one notification at the
2 subscribing network entity indicating a state of the presence information comprises
3 receiving a notification at the subscribing network entity indicating a state of the presence
4 information at the time of the subscription of the network entity to the presence
5 information.

1 8. The method of Claim 1, further comprising registering one or more
2 terminal applications with the network entity, and wherein subscribing the network entity
3 to presence information of the user comprises subscribing the network entity to the
4 presence information of the user in response to the registration of the one or more terminal
5 applications.

1 9. The method of Claim 1, further comprising publishing the presence
2 information of the user.

1 10. The method of Claim 9, wherein publishing the presence information of the
2 user comprises publishing the presence information via a presence application server.

1 11. The method of Claim 10, wherein subscribing the network entity to the
2 presence information of the user comprises subscribing the network entity to the presence
3 information at the presence application server.

1 12. The method of Claim 11, wherein receiving at least one notification at the
2 subscribing network entity indicating a state of the presence information of the user
3 comprises receiving a notification at the subscribing network entity from the presence
4 application server indicating a state of the presence information of the user.

1 13. The method of Claim 1, wherein the network includes an IMS network and
2 the network entity includes a Serving Call Session Control Function (S-CSCF), and
3 wherein subscribing the S-CSCF to presence information of the user comprises providing a

4 Session Initiation Protocol (SIP) SUBSCRIBE message from the S-CSCF to a presence
5 application server to which the presence information of the user is published.

1 14. The method of Claim 13, wherein receiving at least one notification at the
2 subscribing network entity comprises receiving at least one SIP NOTIFY message at the S-
3 CSCF from the presence application server.

1 15. A method for routing communication requests targeted for a user over a
2 network including an IP Multimedia core network Subsystem (IMS) network, comprising:
3 subscribing a Serving Call Session Control Function (S-CSCF) to user
4 presence information published on the network;
5 receiving at least one notification at the S-CSCF indicating a state of the
6 user presence information;
7 creating a routing script at the S-CSCF based on the state of the presence
8 information; and
9 routing communication requests, targeted for the user and received at the S-
10 CSCF, to one or more destinations as dictated by the routing script.

1 16. The method of Claim 15, further comprising identifying one or more
2 attributes of the communication requests received at the S-CSCF, and wherein routing
3 communication requests to one or more destinations comprises routing the communication
4 requests as dictated by the routing script and depending on the attributes of the
5 communication requests.

1 17. The method of Claim 16, wherein the attributes of the communication
2 requests comprise at least one of a caller identity, a caller domain, a caller equipment type,
3 a communication request priority, and a communication request type.

1 18. The method of Claim 15, further comprising publishing the user presence
2 information at a presence network entity coupled to the network, and wherein subscribing

3 the S-CSCF to the user presence information published on the network comprises
4 subscribing the S-CSCF to the user presence information at the presence network entity.

1 19. The method of Claim 18, further comprising issuing a publication message
2 including the user presence information from the user's User Equipment (UE) to the
3 presence network entity, and wherein publishing the user presence information at a
4 presence network entity comprises publishing, at the presence network entity, the user
5 presence information provided via the publication message.

1 20. The method of Claim 15, wherein subscribing the S-CSCF to the user
2 presence information comprises issuing a SIP SUBSCRIBE message from the S-CSCF to a
3 presence network entity to which the user presence information is published, in response to
4 user registration to the IMS network via the S-CSCF.

1 21. The method of Claim 15, wherein receiving at least one notification at the
2 S-CSCF comprises receiving a SIP NOTIFY message at the S-CSCF from a presence
3 network entity to which the user presence information is published, in response to a change
4 of state of the user presence information.

1 22. The method of Claim 15, wherein receiving at least one notification at the
2 S-CSCF comprises receiving a SIP NOTIFY message at the S-CSCF from a presence
3 network entity to which the user presence information is published, wherein the NOTIFY
4 message indicates a state of the presence information at the time of the subscription of the
5 S-CSCF to the presence network entity.

1 23. The method of Claim 15, wherein creating a routing script at the S-CSCF
2 comprises creating a program to cause incoming communication requests targeted for the
3 user to be routed according to the user presence information upon execution of the
4 program.

1 24. The method of Claim 15, wherein creating a routing script at the S-CSCF
2 comprises creating a data structure that provides routing actions for each association of
3 user presence information and communication request attributes.

1 25. The method of Claim 24, wherein routing communication requests
2 comprises routing the communication requests according to the routing actions of the data
3 structure.

1 26. A network entity for routing communication requests targeted for a user
2 over a network, comprising:
3 a processor;
4 a subscription module operable with the processor and configured to
5 subscribe to user presence information published on the network;
6 a notification management module operable with the processor and
7 configured to receive notifications of a state of the user presence information;
8 a routing instruction generation module operable with the processor and
9 configured to convert the state of the user presence information to routing instructions; and
10 a routing module operable with the processor and configured to identify one
11 or more routing destinations for incoming communication requests targeted for the user
12 based on the routing instructions.

1 27. The network entity as in Claim 26, wherein the network comprises an IP
2 Multimedia core network Subsystem (IMS) network, and the network entity comprises a
3 Serving Call Session Control Function (S-CSCF).

1 28. The network entity as in Claim 26, further comprising a transmitter to
2 transmit the incoming communication requests to the routing destinations.

1 29. The network entity as in Claim 26, wherein the routing instruction
2 generation module comprises a routing script generation module operable with the

3 processor and configured to convert the state of the user presence information to a routing
4 script.

1 30. The network entity as in Claim 26, wherein the routing instruction
2 generation module comprises a filter criteria modification module operable with the
3 processor and configured to dynamically modify, based on the user presence information,
4 filter criteria received at the network entity from a database entity, and wherein the
5 modified filter criteria comprises the routing instructions.

1 31. A system for routing communication requests via an IP Multimedia core
2 network Subsystem (IMS) network, comprising:
3 a User Equipment (UE);
4 a presence server coupled to receive and publish presence information
5 associated with the UE; and
6 a Serving Call Session Control Function (S-CSCF) comprising a processor
7 configured to subscribe to the published presence information associated with the UE and
8 to receive notifications of a state of the published presence information, and further
9 configured to generate routing instructions for incoming communication requests targeted
10 for the UE based on the state of the published presence information.

1 32. The system as in Claim 31, wherein the S-CSCF further comprises a
2 memory for storing the routing instructions for use in routing the incoming communication
3 requests.

1 33. The system as in Claim 31, wherein the processor of the S-CSCF is further
2 configured to identify routing destinations for the incoming communication requests
3 targeted for the UE based on the routing instructions.

1 34. The system as in Claim 31, wherein the UE comprises a publication module
2 configured to publish the presence information associated with the UE.

1 35. A computer-readable medium having instructions stored thereon which are
2 executable by a computer system for routing communication requests targeted for a user
3 over a network by performing steps comprising:
4 subscribing a network entity to presence information of the user;
5 receiving at least one notification at the subscribing network entity
6 indicating a state of the presence information of the user; and
7 creating routing instructions for routing incoming communication requests
8 targeted for the user, based on the state of the presence information.